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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIFTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2017

Course Code: CH361

Course Name: ENERGY ENGINEERING(CH)

Max. Marks: 100 Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks. Marks

1	a)	What are the different classifications of energy resources? Explain briefly with examples.	(8)
	b)	Explain fluidized bed combustion.	(7)
2	a)	Explain the facts and remedies for energy crisis.	(8)
	b)	What are the merits & demerits of hydel power plants over thermal and nuclear power plants?	(7)
3	a)	What is energy? Classify different forms of energy. Give an account of present world scenario.	(8)
	b)	Draw the layout of hydel power plant and explain its operation.	(7)

PART B

Answer any two full questions, each carries 15 marks.

4	a)	Explain any three renewable sources of energy that originates from sun.	(6)
	b)	What are the different types of geothermal energy resources?	(4)
	c)	Explain the working of Darrieus rotor.	(5)
5	a)	What are the different types of solar thermal collectors?	(8)
	b)	Explain the thermo chemical methods of biomass conversion.	(7)
6	a)	Explain solar distillation& solar refrigeration.	(10)
	b)	Write about the significance of biogas plants in India's energy strategy.	(5)

PART C

Answer any two full questions, each carries20 marks.

7	a)	Explain the importance of energy conservation? How does energy use impact the environment?	(10)
	b)	Explain molten carbonate fuel cell(MCFC), list its merits and demerits.	(10)
8	a)	Explain the basic principle of magneto hydro dynamics.	(8)
	b)	Write about the recycling technology for energy saving.	(7)
	c)	Explain steam economy in chemical plants.	(5)
9	a)	Write about the classification of fuel cells.	(12)
	b)	Explain the principle of cogeneration.	(8)

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